

CHROMOSOME NUMBERS OF PHANEROGAMS. 1.

Chromosome numbers of phanerogams are reported below together with the voucher data and the herbaria where collections are deposited. Unless indicated the chromosomal records are based on the study of one plant. For haploid counts meiosis is regular unless otherwise noted.

The authors responsible for chromosome counts are listed alphabetically. Citation should have the form of: Doe, J. 1966. *In* Chromosome numbers of phanerogams. 1. Ann. Missouri Bot. Gard. **53**: pp.

BY WALTER H. LEWIS¹

CONVOLVULACEAE

Calystegia sepium (L.) R. Br.: **n** = **11**. Missouri: St. Louis, Missouri Botanical Garden, *Lewis* 6638 (MO).

OROBANCHACEAE

Conopholis americana (L.) Wallr.: **n** = **20** (± 1). Tennessee: Sullivan Co, between Bluff City & Bristol, *Lewis* 6585 (MO).

PORTULACACEAE

Claytonia rosea Rydb.: **n** = **8**. Colorado: Boulder Co, W side of Boulder, first Flat Iron, *Lewis* 6642 (MO).

ROSACEAE

Rosa arkansana Porter: (1) **n** = **14**, **2n** = **28**. Kansas: Bourbon Co, 1 mi S of Harding, *Lewis* 2383 (MO); Cherokee Co, Turck, *Lewis* 2377* (MO), 2 plants; Crawford Co, Girard to 8 mi N, *Lewis* 2378* (MO); Linn Co, La Cygne, *Lewis* 2386 (MO). Missouri: Clinton Co, Cameron to 6 mi S, *Lewis* 2392* (MO), Wallace St Pk, *Lewis* 2391* (MO). Meiotic abnormalities were found for collections from both Kansas and Missouri. For one plant of *Lewis* 2377, 20% of PMC had two chromosomes remaining in the equatorial region during telophase II and for a second plant examined at metaphase I two univalents were occasionally noted outside the equatorial area. Of the plants collected in Clinton County, Missouri, PMC with $13_{II} + 2_I$ were found (*Lewis* 2391) and, at diakinesis, with two interlocked ring bivalents (*Lewis* 2392).

Rosa arkansana Porter: (2) **2n** = **30**. Kansas: Crawford Co, Girard to 8 mi N, *Lewis* 2378 (MO). A rare aneuploid with an extra pair of chromosomes; another plant from the same collection is reported above with $2n = 28$.

Rosa arkansana Porter f. *plena* W. H. Lewis: **2n** = **28**. Saskatchewan: Woodrow, *Lewis* 2310 (MO, US).

Rosa blanda Ait.: **n** = **7**, **2n** = **14**. Maine: Franklin Co, Farmington Falls, *Lewis* 2504 (MO). New Hampshire: Coos Co, Jefferson, *Lewis* 2172 (MO). New

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* Collections marked by an asterisk probably represent hybrid populations between *R. arkansana* and *R. carolina* L.

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York: Onondaga Co, Green Lakes St Pk, *Lewis* 2183 (MO). Ontario: Lanark Co, Blakeney, *Lewis* 2448 (MO); Russell Co, 2 mi E of Clarence, *Lewis* 2451 (MO). Quebec: Kamouraska Co, Kamouraska, *Lewis* 2461 (MO); Rimouski Co, Bic, *Lewis* 2466 (MO).

Rosa carolina L.: **n** = **14**, **2n** = **28**. Georgia: Burke Co, Sardis to Alexander, *Lewis* 2069 (MO); De Kalb Co, Stone Mt, *Lewis* 2077 (MO); Morgan Co, Hard Labor Creek St Pk, *Lewis* 2075 (MO), *Lewis* 2076 (MO). Indiana: Martin Co, 2 mi S of Shoals, *Lewis* 2411 (MO). Missouri: Daviess Co, Gallatin, *Lewis* 2394 (MO), 2 plants; Oregon Co, 4 mi SE of Thomasville, *Lewis* 2362 (MO); Ripley Co, Briar, Clark Natl Forest, *Lewis* 2358 (MO); Sullivan Co, Milan, *Lewis* 2398 (MO). New York: Cayuga Co, Cayuga, *Lewis* 2186 (MO); Onondaga Co, Green Lakes St Pk, *Lewis* 2180 (MO), *Lewis* 2182 (MO); Sullivan Co, 2 mi N of Narrowsburg, *Lewis* 2148 (MO). North Carolina: Burke Co, 3 mi NW of Morganton, *Lewis* 2087 (MO). Ohio: Portage Co, Ravenna, *Lewis* 2198 (MO). Pennsylvania: Lycoming Co, 1 mi W of Linden, *Lewis* 2142 (MO). South Carolina: Sumter Co, Poinsett St Pk, *Lewis* 2061 (MO). Virginia: Augusta Co, Mossey Creek, *Lewis* 2427 (MO), West Augusta, *Lewis* 2014 (MO); Highland Co, Lantz Mt, *Lewis* 2018 (MO), 2 plants; Prince Edward Co, 2 mi S of Green Bay, *Lewis* 2093 (MO); Prince William Co, Henry Hill, Bull Run Natl Battlefield Pk, *Lewis* 2045 (MO), *Lewis* 2049 (MO); Rappahannock Co, Hogwallow Flat Overlook, Shenandoah Natl Forest, *Lewis* 2034 (MO), 1 mi S of Washington, *Lewis* 2029 (MO); Shenandoah Co, Fort Valley, *Lewis* 2438 (MO); Warren Co, 4 mi S of Front Royal, *Lewis* 2032 (MO).

Rosa nitida Willd.: **2n** = **14**. Quebec: Montmagny Co, Bertheir, *Lewis* 2457 (MO).

Rosa palustris Marsh.: **n** = **7**, **2n** = **14**. Illinois: Clay Co, Clay City, *Lewis* 2407 (MO), Xenia, *Lewis* 2406 (MO). Kentucky: Laurel Co, London, *Lewis* 2337 (MO); Metcalfe Co, Wisdom, *Lewis* 2341 (MO). Maryland: Garrett Co, Redhouse, *Lewis* 2020 (MO). Missouri: Mississippi Co, 2 mi W of East Prairie, *Lewis* 2349 (MO). New Hampshire: Cheshire Co, 7 mi N of Jaffrey, *Lewis* 2156 (MO). North Carolina: Randolph Co, 5 mi S of Asheboro, *Lewis* 2430 (MO). Ohio: Trumbull Co, Cortland, *Lewis* 2197 (MO). Pennsylvania: Center Co, Bear Meadows, *Lewis* 2136 (MO). Virginia: Gloucester Co, Gloucester Point, *Lewis* 2002 (MO); Montgomery Co, 1.5 mi W of Blacksburg, *Lewis* 2008 (MO); Norfolk Co, 2 mi S of Deep Creek, *Lewis* 2022 (MO); Southampton Co, 2 mi W of Courtland, *Lewis* 2026 (MO); Stafford Co, 11 mi NW of Fredericksburg, *Lewis* 2436 (MO); Surrey Co, Spring Grove, *Lewis* 2021 (MO). West Virginia: Nicholas Co, 5 mi E of Summersville, *Lewis* 2422 (MO); Randolph Co, Cheat Mt, *Lewis* 2019 (MO), 5 mi N of Valley Head, *Lewis* 2425 (MO).

Rosa virginiana Mill.: **2n** = **28**. New Brunswick: Carleton Co, Chancook, *Lewis* 2501 (MO); Kings Co, Penosquis, *Lewis* 2494 (MO).

Rosa woodsii Lindl.: **2n** = **14**. British Columbia: Kamloops, *Lewis* 2580 (MO). Saskatchewan: Moose Range, *Lewis* 2308 (MO).

RUBIACEAE

Anthospermum herbaceum L. f.: **n** = **11**. Kenya: Rift Valley Prov, ENE slope of Mt Elgon, *Lewis* 5959 (K,MO). South Africa: Transvaal, 24.8 mi SE of Barberton, *Lewis* 6334 (K,MO), 2 plants.

Anthospermum littoreum L. Bolus.: **n** = **11**. South Africa: Natal, Isipingo Beach, *Lewis* 6290 (K,MO), 2 plants.

Borreria dibrachiata (Oliv.) K. Sch.: (1) **n** = **28**. Tanzania: S Highlands Region, 5.3 mi E of Mbeya, *Lewis* 6071 (K,MO).

Borreria dibrachiata (Oliv.) K. Sch.: (2) **n** = **42**. Zambia: N Prov, 5 mi S of Abercorn, *Lewis* 6104 (K,MO).

Borreria ocymoides (Burm. f.) DC.: **n** = **ca 14**. Kenya: Rift Valley Prov, ENE slope of Mt Elgon, *Lewis* 5971 (K,MO), 2 plants.

Diodia natalensis (Hochst.) Garcia: **n** = **14**. South Africa: Natal, 4 mi SE of Inyoni, *Lewis* 6293 (K,MO), 2 plants.

Galium simense Fresen.: **2n** = **44**. Kenya: Rift Valley Prov, ENE slope of Mt Elgon, *Lewis* 5957 (K, MO).

Hedyotis galioides F. Muell.: **2n** = **36**. Western Australia: Yule River, Woodstock Station, *Burbidge* 5955 (AD), 2 progeny (*Lewis* 6400, K,MO).

Hedyotis michauxii Fosb.: **n** = **16**. North Carolina: Cherokee Co, 2.2 mi SW of Cherokee-Swain Co line, *Lewis* 6542 (MO).

Hedyotis purpurea (L.) T. & G.: **n** = **12**. Missouri: Reynolds Co, top of Taum Sauk Mt, *Lewis* 6443 (MO).

Hedyotis salzmännii (DC.) Steudel: **n** = **15**, **2n** = **30**. Brazil: Guanabara State, Rio de Janeiro, *Lewis* 6448 (MO), 2 plants. Meiosis is irregular in many PMC with univalents varying from two to six at metaphase I. About two-thirds of pollen grains were shrivelled.

Oldenlandia corymbosa L.: **2n** = **18**. Brazil: Pernambuco Recife City, *Lewis* 6445 (MO), 2 plants.

Otiophora cf. *caerulea* (Hiern) Bullock: **n** = **ca 18**. Zambia: NW Prov, 4 mi N of Kalene mission, *Lewis* 6207 (K,MO).

Paederia scandens (Lour.) Merrill var. *mairei* (Lév.) Hara: **2n** = **44**. Japan: N Honshu, Aobayama Botanical Garden, Sendai, *Lewis* 6434 (MO).

Paraknoxia parviflora (Stapf ex Verdc.) Verdc. ex Bremek.: **n** = **10**. Kenya: Rift Valley Prov, ENE slope of Mt Elgon, *Lewis* 5954 (K,MO), *Lewis* 5967 (K,MO).

Pavetta albertina S. Moore: **n** = **11**, **2n** = **22**. Uganda: W Prov, Queen Elizabeth Natl Pk, *Lewis* 6013 (K,MO), 2 plants.

Pavetta schumanniana F. Hoffm. ex K. Sch.: **n** = **33**. Zambia: NW Prov, Mujileshi River, 4-5 mi E of Angola-Zambia border, *Lewis* 6144 (K,MO).

Pentanisia angustifolia (Hochst.) Hochst.: **n** = **ca 20**. South Africa: Natal, Drakensberg Mts, base of Mt Champagne, *Lewis* 6263 (K,MO).

Pentanisia confertifolia (Baker) Verdc.: **n** = **ca 10**. Zambia: N Prov, 3 mi S of Abercorn, *Lewis* 6103 (K,MO).

Pentanisia foetida Verdc.: **n** = **20**. Kenya: Central Prov, 2.7 mi E of Aberdare Natl Pk (eastern entrance), *Lewis* 5926 (K,MO).

Pentanisia ouranogyne S. Moore: **n** = **20**. Ethiopia: Harar Prov, 22.2 km S of junction of Harar-Giggiga Rd & Fich Rd, *Lewis* 5864 (K,MO), 2 plants. Kenya: Rift Valley Prov, ENE slope of Mt Elgon, *Lewis* 5965 (K,MO), 2 plants. Uganda: N Prov, 7 mi W of Namulu Prison, base of Mt Oboa, *Lewis* 5989 (K, MO), 2 plants.

Pentanisia prunelloides (Kl. ex Eckl. & Zeyh.) Walp. subsp. *prunelloides*: **n** = **20**. South Africa: Natal, Charters Creek, *Lewis* 6295 (K,MO), 3 plants.

Pentanisia prunelloides (Kl. ex Eckl. & Zeyh.) Walp. subsp. *latifolia* (Hochst.) Verdc.: **n** = **20**. South Africa: Natal, base of Mt Champagne, Drakensberg Mts, *Lewis* 6263 (K,MO), 2 plants.

Pentanisia schweinfurthii Hiern: **n** = **20**. Zambia: NW Prov, 1 mi SE of Solwezi, *Lewis* 6130 (K,MO). Rhodesia: Salisbury Dist, Salisbury, Cranborne, *Lewis* 6254 (K,MO). Tanzania: S Highlands Region, 5.3 mi E of Mbeya, *Lewis* 6070 (K,MO), 2 plants.

Pentanisia sykesii Hutch.: **n** = **20**. Zambia: S Prov, 8 mi SW of Choma, *Lewis* 6242 (K,MO), 2 plants.

Psychotria nairobiensis Bremek.: **n** = **11**. Kenya: Nairobi, Ainsworth Hill (cultivated), *Lewis* 5907 (K,MO).

Richardia brasiliensis (Moq.) Gómez: **n** = **14**. Brazil: Mato Grosso-Paraná States, Paraná River nr Guaíra, *Lewis* 6444 (MO). Florida: Alachua Co, University of Florida campus, *Wiggins* 19745 (DS, FLAS). South Africa: Natal, Charters Creek, *Lewis* 6297 (K,MO), 2 plants.

Sabicea angolensis Wernh.: **n** = **22**. Zambia: NW Prov, 4 mi N of Kalene mission, *Lewis* 6195 (K,MO).

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IRIDACEAE

Sisyrinchium atlanticum Bicknell: **n** = **16**. Florida: Hanes Co, 4.7 mi N of Bonifay, *Oliver* 404 (MO), 3 plants. Mississippi: Jackson Co, intersection of Hwys 90 & 64, *Oliver* 402 (MO).

Sisyrinchium cf. *atlanticum* Bicknell: **n** = **8**. Georgia: Early Co, 2.5 mi NW of Early-Miller Co line & Hwy 39, *Oliver* 452 (MO).

Sisyrinchium campestre Bicknell: **n** = **16**. Iowa: Ringold Co, ca 2 mi N of Mount Ayr, *Lewis* 6619 (MO).

Sisyrinchium demissum Greene: **n** = **16**. Arizona: Greenlee Co, ca 77 mi N of Clifton, *Oliver* 375 (MO).